KARAPETYAN, S.Ye.

Geometric values of some congruence invariants. Nauch. dokl. vys. skoly; fiz.-mat. nauki no.1:48-52 '58. (MIRA 12:3)

1.Yerevanskiy gosudarstvennyy universitet im. Kh. Abovyana.
(Congruences (Geometry))

16(1)

AUTHOR: Karapetyan, S. E. SOV/155-58-2-11/47

TITLE: Two Congruences With Common Invariants F and F' (Dve kongruentsii s obshchimi invariantami F i F')

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 2, pp 55-59 (USSR)

ABSTRACT: The present paper is a continuation of a recently published paper of the author [Ref 1] . There he considered transformations of tetrahedra and determined two invariants: F - invariant of the first focal surface (A_1) and F' - invariant of the second focal surface (A_2). In the present paper the author considers two congruences (A_1A_2) and ($\bar{A}_1\bar{A}_2$) between the rays of which there exists a one-to-one relation, for which the focal invariants of the corresponding focal surfaces of these congruences remain preserved.
There are 9 Soviet references.

ASSOCIATION: Yerevanskiy armyanskiy pedagogicheskiy institut (Yerevan Armenian Pedagogical Institute)

SUBMITTED: February 15, 1958

Card 1/1

AUTHOR: Karapetyan, S.Ye. SOV/20-122-3-3/57

TITLE: Harmonic Quadrics and Certain Congruence Ruled Surfaces (Garmonicheskiye kvadriki i nekotoryye lineychatyye poverkhnosti kongruentsiy)

PERIODICAL: Doklady Akademii nauk SSSR,1958,Vol 122,Nr 3,pp 335-338 (USSR)

ABSTRACT: The author considers congruences the harmonic ruled surfaces of which form quadrics. He applies Cartan's method according to the well-known work of Finikov [Ref 1,2] and essentially uses his own earlier results [Ref 3-5] . From these he takes the equations of the harmonic ruled surfaces of the first and second focal congruence surface and from these, in accordance with the requirement that the two harmonic ruled surfaces be quadrics he obtains certain invariant equations for characterizing the considered congruence. The properties of the considered congruences are now connected with the generated Laplace sequence - the configuration L .
Theorem: The two harmonic ruled surfaces of a focal surface are quadrics, if and only if this congruence generates the configuration L .
Theorem: Two harmonic quadrics of a congruence of L simul-

Card 1/3

taneously are harmonic quadrics of the other congruences of this configuration.
Theorem: If the two harmonic ruled surfaces of the given focal surface of the congruence are quadrics, then all asymptotic ruled surfaces of this congruence are quadrics too.
Theorem: If the two asymptotic ruled surfaces of a focal surface of the congruence are quadrics and if the configuration L generated by the congruence closes after the fourth step, then the harmonic ruled surfaces of this congruence are quadrics too.
In the last section of the paper some further remarkable ruled surfaces of the congruence are given and their properties are considered.
There are 6 Soviet references.

ASSOCIATION: Armyanskiy gosudarstvennyy pedagogicheskiy institut imeni Kh.Abovyana (Armenian State Pedagogical Institute imeni Kh. Abovyan)

PRESENTED: April 25, 1958, by S.L. Sobolev, Academician

KARAPETYAN, S. Yu.

16(1) PHASE I BOOK EXPLOITATION SOV/2660

Vsesoyuznyy matematicheskiy s"yezd. 3rd, Moscow, 1956

Trudy. t. 4: Kratkoye soderzhaniye sektsionnykh dokladov. Doklady inostrannykh uchenykh (Transactions of the 3rd All-Union Mathematical Conference in Moscow. vol. 4: Summary of Sectional Reports. Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959. 247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut.

Tech. Ed.: G.N. Shevchenko; Editorial Board: A.A. Abramov, V.O. Bolтyanskiy, A.M. Vasil'yev, B.V. Medvedev, A.D. Myshkis, S.M. Nikol'skiy (Resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A. Rybnikov, P. L. Ul'yanov, V.A. Uspenskiy, N.G. Chetayev, G. Ye. Shilov, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the 3rd All-Union Mathematical Conference, held in June and July 1956. The book is divided into two main parts. The first part contains summaries of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the editor by non-Soviet scientists. In those cases when the non-Soviet scientist did not submit a copy of his paper to the editor, the title of the paper is cited and, if the paper was printed in a previous volume, reference is made to the appropriate volume. The papers, both Soviet and non-Soviet, cover various topics in number theory, algebra, differential and integral equations, function theory, functional analysis, probability theory, topology, mathematical problems of mechanics and physics, computational mathematics, mathematical logic and the foundations of mathematics, and the history of mathematics.

Card 15/ 34

05689
SOV/22-12-4-2/9

16(1)

AUTHOR: Karapetyan, S.Ye.

TITLE: The Pair A and Some Properties of the Pair T

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1959, Vol 12, Nr 4, pp 27 - 34 (USSR)

ABSTRACT: A configuration A of two congruences is defined by making correspond ruled surfaces to each ray of the congruences and then demanding that the tangential plane of each of these ruled surfaces passes through the point of tangency of the other ruled surface. The defined configuration forms a generalization of the T-configuration of Finikov [Ref 3,4]. The author proves some properties of the two configurations, e.g. the directions of the main ruled surfaces of T are identical with the main directions of the same configuration (see Calapso [Ref 6,7]).
There are 12 Soviet references.

ASSOCIATION: Armyanskiy pedagogicheskiy institut imeni Kh.Abovyana (Armenian Pedagogical Institute imeni Kh. Abovyan)

SUBMITTED: October 27, 1958

Card 1/1

85237

S/022/60/013/002/008/011 XX
C 111/C222

16.5600

AUTHOR: Karapetyan, S.Ye.

TITLE: Configuration L

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1960, Vol. 13, No. 2, pp. 3 - 16

TEXT: The present paper joins the author's earlier papers (Ref. 3,4,10,11) and uses the same notations In (Ref. 3) the author obtained the equation of the Lie quadric for all ruled surfaces $\left(\omega_2^4 = \lambda\,\omega_1^3\right)$ of the congruence. On the first focal surface to their harmonic ruled surfaces there corresponds the conjugate net $(\alpha(\omega_1^3)^2 - \beta(\omega_2^4)^2 = 0)$ with the property that both tangents of the net form a harmonic quadruple with the two tangents of the first focal net. Thus the mentioned conjugate net is called the harmonic net Γ_1 of the first focal surface (A_1). The harmonic ruled surfaces of the congruence

Card 1/ 4

Configuration L

(A_1, A_2) which correspond to the net Γ_1 are again denoted with Γ_1 . Γ_2 is the harmonic net of the focal surface (A_2) etc.

Amongst other things it is shown : Two focal surfaces of the congruence and two tangenting planes of two arbitrary ruled surfaces of the congruence (with a common tangenting point) form a harmonic quadruple then and only then if these ruled surfaces are conjugate in the sense of Sania. (A_1) is the common focal surface of two congruences of the Laplace sequence. Ruled surfaces belonging to an other congruence of the sequence and corresponding to the lines Γ_1 are denoted with Γ_1' . The Lie quadrics of Γ_1, Γ_2, Γ_1', Γ_2' are determined. Two geometric characteristics of two ruled surfaces, conjugate in the sense of Sania, of the congruence are given. If a pair of corresponding quadrics Γ_1 and Γ_1' has a common tangenting plane along the ray of the given congruence, then it has a common tangenting plane along the ray of the following congruence of the Laplace sequence. If in each pair the corresponding quadrics of Γ_1 and Γ_1' coincide, then

Configuration L

S/022/60/013/002/008/011 XX
C111/C222

it holds : 1) The sequence generated by the congruence (A_1, A_2) is an R-sequence (cf. (Ref. 6)); 2) Each pair of corresponding quadrics of Γ_2 and Γ_2' coincides; 3) All focal surfaces of the sequence are surfaces of second order; 4) Such a configuration is denoted as a configuration L and depends on 10 arbitrary constants. This configuration L is formed by two surfaces of second order. The diagonals A_1A_4 and A_2A_3 are simultaneously conjugate with respect to both surfaces and describe a congruence of straight lines each directrix of which intersects all tangents of a number of the nets Γ_1 and Γ_2.

There are 11 references : 10 Soviet and 1 Italian.

[Abstracter's note : (Ref. 3,4,10,11) are papers of the author in Doklady Akademii nauk SSSR 1957, Vol. 117, No. 2; Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, No. 1 ; Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, No. 2 ; Doklady

85237

84303

16.5600

S/022/60/013/004/005/007XX
C111/C222

AUTHOR: Karapetyan, S.Ye.

TITLE: On a Congruence Transformation

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1960, Vol.13, No.4, pp.3-17

TEXT: The papers (Ref.1,2,3,4) assert that the straight lines of the P_3 are mapped onto the points of the hyperquadratic Q_4^2 of the P_5. The tangenting plane intersects Q_4^2 in a three-dimensional cone K_3^2 the vortex of which lies in the tangenting point. The asymptotic lines on Q_4^2 are determined by the differential equation

(5) $\omega_1^3\omega_2^4 - \omega_2^3\omega_1^4 = 0.$

The quadratic fundamental form (5) defines a polarity of the varieties in the tangenting hyperplane. Two varieties L_m and L_{m-4} being incident to the tangenting point and to the tangenting plane, are called conjugated if they correspond to eachother according to this polarity.
In the preset paper the author uses the same conjugate varieties in order

Card 1/4

84303
S/022/60/013/004/005/007XX
C111/C222

On a Congruence Transformation

to obtain a congruence transformation and to obtain some theorems. The author uses the method of Cartan according to (Ref.5). The conjugate varieties can be described as follows: Let the two-dimensional surface (p_1) be the image of the congruence in the P_5 and L_1 be the tangent of (p_1) along the line $\omega_2^4 = \lambda\omega_1^3$. In the polarity (5), to the straight line L_1 there corresponds a certain L_3 which intersects the tangential 2-plane of (p_1) in a certain L_1'. The directions L_1 and L_1' are called conjugate in the congruence (P_1). The L_3-characteristic along L_1 is the 2-plane L_2 having only one common point p with the tangential 2-plane of (p_1). An analogous point p' can be obtained if L_1 and L_1' are changed. The construction of the point p and p' in the P_3 leads to Laplace transformations. The straight line pp' intersects Q_4^2 in certain given points p_1' and p_1''. In the P_3 every straight line P_1', P_1'' lies on a focal surface and goes through the other focus of the congruence (P_1). The (p_1') and (p_1'') are denoted as Γ-transformations of the congruence

Card 2/4

84303

S/022/60/013/004/005/007XX
C111/C222

On a Congruence Transformation

(p_1) in the conjugated directions $\omega_2^4 = \pm\lambda\omega_1^3$. The author gives conditions for the fact that the transformations Π and the focal surfaces of (p_1) are harmonic and conjugated, respectively. The case where the developable surfaces of the congruences (p_1') and (p_1'') intersect with the focal surfaces (p_1) along asymptotic lines, is investigated separately. Furthermore the case where the developable surfaces of the congruences (p_1') and (p_1'') intersect with the focal planes of the congruence (P_1) in a harmonic net is investigated. In this case (p_1), (p_1'), (p_1'') are W-congruences and the asymptotic lines on their focal surfaces correspond to eachother. Finally the case is investigated, where the straight lines p_1' and p_1'' are polarly conjugated with respect to the two Lie quadrics of the focal surfaces of

Card 3/4

KARAPETYAN, S.Ye.

Quadrics of congruences. Dokl.AN Arm.SSR 30 no.2: 65-72 '60. (MIRA 13:6)

1. Yerevanskiy armyanskiy pedagogicheskiy institut imeni Kh. Abovyana. Predstavleno akad. AN Armyanskoy SSR M.M. Dzhrbashyanom.
(Congruences(Geometry))

KARAPETYAN, S.Ye. (Yerevan)

Transformation of congruences by means of semiquadrics. Mat.sbor. 50 no.1:109-116 Ja '60. (MIRA 13:6)
(Congruences)

S/020/60/133/005/022/034XX
C111/C222

16.5600

AUTHOR: Karapetyan, S.Ye.

TITLE: Conjugate Manifolds and Their Application

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol.133, No.5, pp.1007-1010.

TEXT: As it is well-known (Ref.2-4), the straight lines of the P_3 are mapped into points of the hyperquadric Q_4^2 of the P_5. Q_4^2 generates a polarity of the linear subspaces in the P_5, where the sum of dimensions of the conjugate spaces is 4. If a subspace lies in the tangential hyperplane of the Q_4^2 and passes through the tangenting point, then the conjugate subspace has this property too. Such subspaces are called conjugate manifolds. The common subspace of two conjugate manifolds L_m and L_{4-m} is called an asymptotic manifold.

An infinitesimal displacement of the tetrahedron $A_1A_2A_3A_4$ in the projective space is described by

$$dA_i = \omega_i^k A_k, \qquad i,j,k=1,2,3,4. \tag{1}$$

Card 1/3

S/020/60/133/005/022/034XX
C111/C222

Conjugate Manifolds and Their Application

where ω_i^k are linear differential forms connected with the structural equations of the space $D\omega_i^k = [\omega_i^j\ \omega_j^k]$ (cf.(Ref.1)). Let the analytic straight lines be denoted by

(2) $p_1 = (A_1A_2)$, $p_2 = (A_3A_4)$, $p_3 = (A_2A_3)$, $p_4 = (A_1A_4)$, $p_5 = (A_1A_3)$, $p_6 = (A_4A_2)$.

The tangential hyperplane of the Q_4^2 in the point p_1 is determined by the Graßmann product $(p_1p_3p_4p_5p_6)$. The asymptotic manifold is determined from the postulate $(d^2p_1p_3p_4p_5p_6p_1) = 0$, which leads to

(3) $\omega_1^3\omega_2^4 - \omega_2^3\omega_1^4 = 0$.

If A_1A_2 describes a ruled surface L in P_3, then its image describes a curve l on Q_4^2 ; if the ruled surface is developable, then the image

KARAPETYAN, S.Ye.

Transformation of a congruence by means of ruled surfaces.
Dokl.AN Arm. SSR 32 no.1:9-16 '61. (MIRA 14:3)

1. Armyanskiy pedagogicheskiy institut imena Kh.Abovyana.
Predstavleno akademikom AN Armyanskoy SSR M.M. Dzhrbashyanom.
(Congruences(Geometry)) (Surfaces, Ruled)

KARAPETYAN, S.Ye.

Theory of pairs of congruences. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 14 no.4:37-47 '61. (MIRA 14:11)

1. Armyanskiy pedagogicheskiy institut imeni Kh. Abovyana.
(Congruences (Geometry))

KARAPETYAN, S.Ye.

Linear manifolds of straight lines and planes in four-dimensional projective space. Izv.AN Arm.SSR.Ser.fiz.-mat.nauk 15 no.1:53-72 '62. (MIRA 15:2)

1. Armyanskiy pedagogicheskiy institut imeni Kh.Abovyana i institut matematiki i mekhaniki AN Armyanskoy SSR.
(Geometry, Projective)

KARAPETYAN, S.Ye. (Yerevan)

Complexes of straight lines in three-dimensional projective space. Mat.sbor. 56 no.3:343-352 Mr '62. (MIRA 15:4)

1. Armyanskiy pedagogicheskiy institut imeni Kh.Abovyana.
(Aggregates) (Geometry, Differential)

KARAPETYAN, S.Ye.

Projective-differential geometry of a two-parameter family of straight lines and planes in a four-dimensional space. Part 1. Izv.AN Arm.SSR.Ser.fiz.-mat.nauk 15 no.2:25-43 '62. (MIRA 15:4)

1. Armyanskiy pedagogicheskiy institut imeni Kh. Abovyana i Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Geometry, Differential--Projective)

KARAPETYAN, S.Ye.

Projective differential geometry of two-parameter families of straight lines and surfaces in four-dimensional space. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 15 no.3:17-28 '62. (MIRA 15:9)

1. Armyanskiy pedagogicheskiy institut imeni Kh. Abovyana i Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Geometry, Differential--Projective)

KARAPETYAN, S.Ye.

Projective differential geometry of families of n-dimensional planes. Part 1. Izv. AN Arm SSR. Ser. fiz.-mat. nauk 16 no.3: 3-22 '63. (MIRA 16:8)

1. Yerevanskiy zaochnyy pedagogicheskiy institut i Institut matematiki i mekhaniki AN ArmSSR.
(Geometry, Differential—Projective)

KARAPETYAN, S.Ye.

Projective differential geometry of a family of multidimensional planes. Part.2. Izv. AN Arm.SSR.Ser.fiz.-mat. nauk 16 no.5:3-22 '63. (MIRA 16:11)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR i Armyanskiy zaochnyy pedagogicheskiy institut.

KARAPETYAN, S.Ye.

Projective differential geometry of families of n-dimensional planes. Part 3. Izv. AN Arm. SSR.Ser.fiz.-mat.nauk 17 no.1:3-21 '64. (MIRA 17:3)

1. Armyanskiy zaochnyy pedagogicheskiy institut i Institut matematiki i mekhaniki AN Armyanskoy SSR.

KARAPETYAN, T.A.

Distribution and prospects for the development of the industry of mining building materials in the Shiraki Steppe [in Armenian with summary in Russian]. Nauch. trudy Erev. un. 63:183-208. '58.
(MIRA 11:6)

1. Yerevanskiy gosudarstvennyy universitet, kafedra ekonomicheskoy geografii.
(Armenia—Building materials industry)

AID P - 4937

Subject : USSR/Electronics

Card 1/1 Pub. 89 - 4/18

Author : Karapetyan, V.

Title : Ultrashort wave school radio stations

Periodical : Radio, 8, 19-20, Ag 1956

Abstract : The author points to the necessity of paying more attention to the development of ultrashort wave radio stations in schools. These school stations contribute to the familiarization of more people with radio and radio equipment.

Institution : None

Submitted : No date

GUKASYAN, V.; KARAPETYAN, V.

Production of concrete with a natural texture finish for outer wall panels. Prom.Arm. 5 no.8:54-55 Ag '62. (MIRA 15:8)

1. Armyanskiy institut stroitel'nykh materialov i sooruzheniy.
(Armenia--Building materials)

KARAPETYAN, V.A.

Brief reports. Zav. lab. 25 no.1:126 '59. (MIRA 12:1)

1.Moskovskiy aviatsionny tekhnologicheskiy institut.
(Grinding machines)

KARAPETYAN, V.A.

33141
S/120/61/000/006/007/041
E032/E114

21.6000

AUTHORS: Khrimyan, A.V., Yegiyan, K.Sh., Nalbandyan, N.A., Avakyan, V.V., and Karapetyan V.A.

TITLE: Measurement of charged-particle masses with the aid of scintillation counters

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1961, 52-56

TEXT: The method can be used to (a) select particles which stop in the scintillator owing to ionization losses, and (b) to determine the mass of the particles by measuring their energy and range in the scintillator. The device consists of a telescope of n scintillation counters (C_1,....., C_n) with thickness ℓ_1,..... ℓ_n respectively. If a particle which has passed at an angle of φ through k - 1 scintillators has come to rest in the scintillator C_k at a depth ℓ_x, and at the end of its range in the m + 1 scintillators C_{k-m},.....,C_k the energy losses ΔE_{k-m},..... ΔE_k were due to ionization only, then it can be shown that:

Card 1/6

$$\frac{\Delta E_{k-i}}{\Delta E_{k-(i+1)}} = f_i\left(\frac{\Delta E_{k-(i+1)}}{\Delta E_{k-(i+2)}},\ \ell_{k-1},\ldots,\ell_{k-(i+2)}\right) \quad (i = 0,\ldots,m-2) \qquad (1)$$

This holds whatever the nature of the particle, the direction of its motion, and range in the last scintillator C_k. Thus, by measuring the energies $\Delta\mathcal{E}_1,\ldots,\Delta\mathcal{E}_n$ in the scintillators $C_1,\ldots,C_n$ one can select with the aid of Eq.(1) all those particles which come to rest in the scintillators $C_{k-m},\ldots,C_k$ by losing energy in ionization processes only.
For stable particles $\Delta\mathcal{E}_i = \Delta E_i$. If on the other hand a primary particle decays (or is captured) in the scintillator C_k then the energy liberated in C_k is $\Delta\mathcal{E}_k = \Delta E_k + \delta E_k$ where the latter quantity is the energy of the secondary particles. In this case the first equation ($i = 0$) in Eq.(1) can only be used for the determination of the unknown energy:

$$\Delta E_k = \Delta\mathcal{E}_{k-1}\, f_o\,(\Delta\mathcal{E}_{k-1}/\Delta\mathcal{E}_{k-2}) \qquad (4)$$

Card 2/6

and the remaining relations in Eq.(1) are used to select the ionization stoppages. The energy loss of a particle with an ionizing power I/I_{min} in the scintillator C_1 is given by:

$$\Delta\mathcal{E}_i = B\,(I/M_{min})_{C_i}\,\ell_i \quad \text{MeV} \tag{5}$$

where B is in MeV/cm and represents the minimum ionization loss in the particular scintillator, and ℓ_i is the thickness of the scintillator C_i in cm. Thus the energy lost by a particle before stopping in scintillators $C_{k-m}, \ldots, C_k$ is given by

$$E = \sum_{i=k}^{k-m} \Delta\mathcal{E}_i$$

If Eq.(1) is not satisfied for $i = 0$, then

$$E = \sum_{i=k-1}^{k-m} \Delta\mathcal{E}_i + \Delta E_k \tag{6}$$

Card 3/6

where ΔE_k is given by Eq.(4). The range of a particle in the scintillators $C_{k-m}, \ldots, C_k$ is given by:

$$R = \left(\sum_{i=k-1}^{k-m} \ell_i + \ell_x \right) \operatorname{cosec} \varphi \qquad (7)$$

in which all the quantities except ℓ_x are known. If the scintillators are looked upon as simple filters then

$$\ell_x = 1/2\ \ell_k \pm 1/2\ \ell_k.$$

ℓ_x can also be determined from a relation of the form:

$$\ell_x = F(f_o, \ell_{k-1}, \ell_{k-2}) \qquad (3)$$

In order to verify the above method the authors have used the results obtained with the instrument described by A.I. Alikhanov, A.V. Khrimyan, V.K. Kosmachevskiy, V.V. Avakyan, Yu.V. Gorodkov, K.Sh. Yegiyan and N.A. Nalbandyan (Ref.6: Proceedings of the International Conference on Cosmic Rays, 1959, 1960, v.1, 183)

Card 4/ 6

Measurement of charged-particle ...

The instrument consists of a magnetic mass spectrometer, a five-layer propertional counter (A.I. Alikhanov, V.A. Lubimov, G.P. Elisiyev, CERN Symposium, v.2, 1956, 87) and five scintillation counters (V.K. Kosmachevskiy and M.S. Aynuddinov, PTE, no.3, 1956, 49). The rms error in the momenta between 0.2 and 1 GeV/c was approximately 8 to 5% for protons and 2 to 4% for π-mesons. The ionizing power of the particles could be measured with the proportional counter to an average accuracy of ± 14%. For particles stopping in the scintillation counters the average losses in the scintillators could be measured to ± 10%. Preliminary results indicate that the efficiency of selection of particles which come to rest owing to ionization only is about 0.8. The average accuracy with which the masses can be determined from the energies and ranges is approximately 20%. The statistics on which these results are based are limited and therefore the results are only preliminary. The experiment did not confirm the possibility of investigating the masses and decays of unstable particles. The method may find wide-ranging applications and is amenable to automation. Acknowledgments are

Card 5/6

Measurement of charged-particle ...

expressed to A.I. Alikhanov and A.I. Alikhanyan for interest and discussions, and to Yu.V. Gorodkov, M.P. Lorikyan, I.P. Karabekov, K.A. Khurshudyan, G.P. Matevosyan, V.V. Truzyan, E.V. Patvakanyan, G.M. Smsaryan, A.A. Oganesyan and B.V. Tovmasyan for assistance in the organisation and execution of this work.
There are 4 figures and 11 references: 5 Soviet-bloc and 6 non-Soviet-bloc. The four most recent English language references read as follows:
Ref.2: J.W. Keuffel, R.L. Call, W.H. Sandmann, M.O. Larson. Phys. Rev. Letters, v.1, 1958, 203.
Ref.4: Phys. Rev., v.114, 1959, 1150.
Ref.5: E. Birman, R. Lea, J. Orear, S. Rosendorff. Phys. Rev., v.113, 1959, 710.
Ref.7: J. Steinberger, 1958 Annual International Conference on High Energy Physics at CERN, Geneva, 1958.
ASSOCIATION: Fizicheskiy institut AN ArmSSR
(Physics Institute, AS Armenian SSR)

SUBMITTED: April 3, 1961
Card 6/6

S/048/62/026/006/019/020
B125/B102

9.6150

AUTHORS: Khrimyan, A. V., Yegiyan, K. Sh., Nalbandyan, N. A., Avakyan, V. V., and Karapetyan, V. A.

TITLE: On the measurement of masses of charged particles by means of scintillation counters

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 6, 1962, 831-836

TEXT: A group of scintillation counters can be used to determine the stoppings due to ionization losses and the masses (range-energy measurement). The apparatus here used comprised a magnetic mass spectrometer ($\bar{H}$ = 6850 oe), a five-layer proportional counter and five scintillation counters. After measuring the energies released from the particle in the scintillators C_1, ..., C_n with the thicknesses l_1, ..., l_n ($n \geqslant 3$) the stoppings due to ionization losses were distinguished from the nuclear interactions by applying the criterion

Card 1/3

On the measurement of masses ...

$$\frac{\Delta E_{k-i}}{\Delta E_{k-(i+1)}} = f_i\left(\frac{\Delta E_{k-(i+1)}}{\Delta E_{k-(i+2)}},\ l_{k-1},\ \ldots,\ l_{k-(i+2)}\right) \quad (i=0,\ \ldots,\ m-2)$$

ΔE_{k-m}, ..., ΔE_k are the energy losses in the scintillators C_{k-m}, ..., C_k. The four quantities momentum, ionization power, range and energy are measured by this device. From these, the mass of the particles is found by the momentum - ionization and range - energy methods. The mass spectrum as measured by the first method has a maximum at $\sim$1780 m_e and that obtained from the second method a maximum at $\sim$1850 m_e. In both cases a weak deuteron spectrum appears between 3500-4500 m_e. The stoppings due to ionization are identified with an efficiency of $\sim$ 0.8. The stoppings due to other causes are eliminated with an efficiency of $\sim$0.9-1. This method was tested by the devices available at the time and can undoubtedly be improved upon by more perfect selection and use of apparatus. Its applicability to decay processes and to mass measurements of unstable particles has not yet been confirmed experimentally. There are 4 figures. The most important English-language reference is:
Stenberger J. 1958 Annual International Conference on High Energy Physics at CERN, Geneva, 1958.
Card 2/3

S/048/62/026/006/020/020
B181/B104

AUTHORS: Khrimyan, A. V., Yegiyan, K. Sh., Nalbandyan, N. A., Avakyan, V. V., and Karapetyan, V. A.

TITLE: Mass measurements of low-intensity charged-particle groups by various methods

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 6, 1962, 837- 840

TEXT: The mass of particles produced by the action of cosmic rays was determined from (1) momentum and ionization, (2) momentum and length of path, (3) momentum and energy, (4) ionization and energy, (5) ionization and length of path, (6) energy and length of path. The experimental arrangement (A. V. Khrimyan, V. V. Avakyan, N. A. Nalbandyan, K. Sh. Yegiyan, M. P. Pleshko, present publication, p. 722) consisted of a mass spectrometer, a proportional counter, two scintillation counters for determining the energy and length of path, and three scintillation counters for determining the energy losses of scattered particles. (2) and (3) gave masses too high, (4), (5); and (6) masses too small for the 203

Card 1/2

KHRIMYAN, A.V.; YEGIYAN, K.Sh.; NALBANDYAN, N.A.; AVAKYAN, V.V.; KARAPETYAN, V.A.

Measurement of the masses of charged particles with the aid of scintillation counters. Izv. AN SSSR. Ser. fiz. 26 no.6:831-836 Je '62. (MIRA 15:6)

1. Fizicheskiy institut Akademii nauk Armyanskoy SSR.
(Scintillation counters) (Particles (Nuclear physics))

KARIMYAN, A.V.; YEGIYAN, K.Sh.; NALBANDYAN, N.A.; AVAKYAN, V.V.; KARAPETYAN, V.A.

Various methods for measuring the masses of low-intensity groups of charge particles. Izv. AN SSSR. Ser. fiz. 26 no.6:837-840 Je '62. (MIRA 15:6)

1. Fizicheskiy institut Akademii nauk Armyanskoy SSR.
(Particles (Nuclear physics)) (Mass spectrometry)

AKOPYAN, A.V.; KARAPETYAN, V.A.

Experimental study of the rigidity of reinforced tufferete beams under the prolonged action of loads. Izv. AN Arm. SSR. Ser. tekh. nauk 17 no. 4:77-82 '64. (MIRA 17:11)

1. Armyanskiy nauchno-issledovatel'skiy institut stroitel'nykh materialov i sooruzheniy.

KARAPETYAN, V. K.

USSR/Agriculture
Plant Breeding
Wheat

Jul/Aug 48

"Changing the Nature of Hard Wheats Into Soft Wheats," V. K. Karapetyan, Inst of Genetics, Acad Sci USSR, 17 pp

"Agrobiologiya" No 4

PA 43/49T3

Changes in life characteristics of wheat result in a series of changes and morphological indications. Conducted experiments to determine changes in a series of changes to determine changes tions. Noticed a definite similarity to soft wheat. Observed most of hard wheat into winter wheat. Observed wheat which nite similarity to soft wheat. Observed most noticeable changes in vernalized hard wheat. noticeable changes in vernalized soft wheat. when sown during fall season yielded soft wheat when sown during fall season yielded soft wheat Based experiments on Lysenko's theory that wheat would change its characteristics if left in the ground in winter. Many tables show experimental results.

43/49T3

KARAPETYAN, V. K.

PA 43/49T72

USSR/Medicine - Plants Jul/Aug 48
Medicine - Environment

"Possibility of Transforming Certain Types of Cultivated Plants Into Other Types" 2 pp

"Agrobiologiya" No 4

Neo-Darwinist-Morganist theory of nonhereditary phenotypic changes has been disproved. Michurin's theory of genetics is the right one, and its acceptance will result in greater achievements by Soviet biologists and selection specialists. Before to work by V. K. Karapetyan, which proves beyond all doubt that changes in the nature of an [redacted]
43/49T72

USSR/Medicine - Plants (Contd) Jul/Aug 48

organism are not hereditary factors but are brought about by changes in its environment.

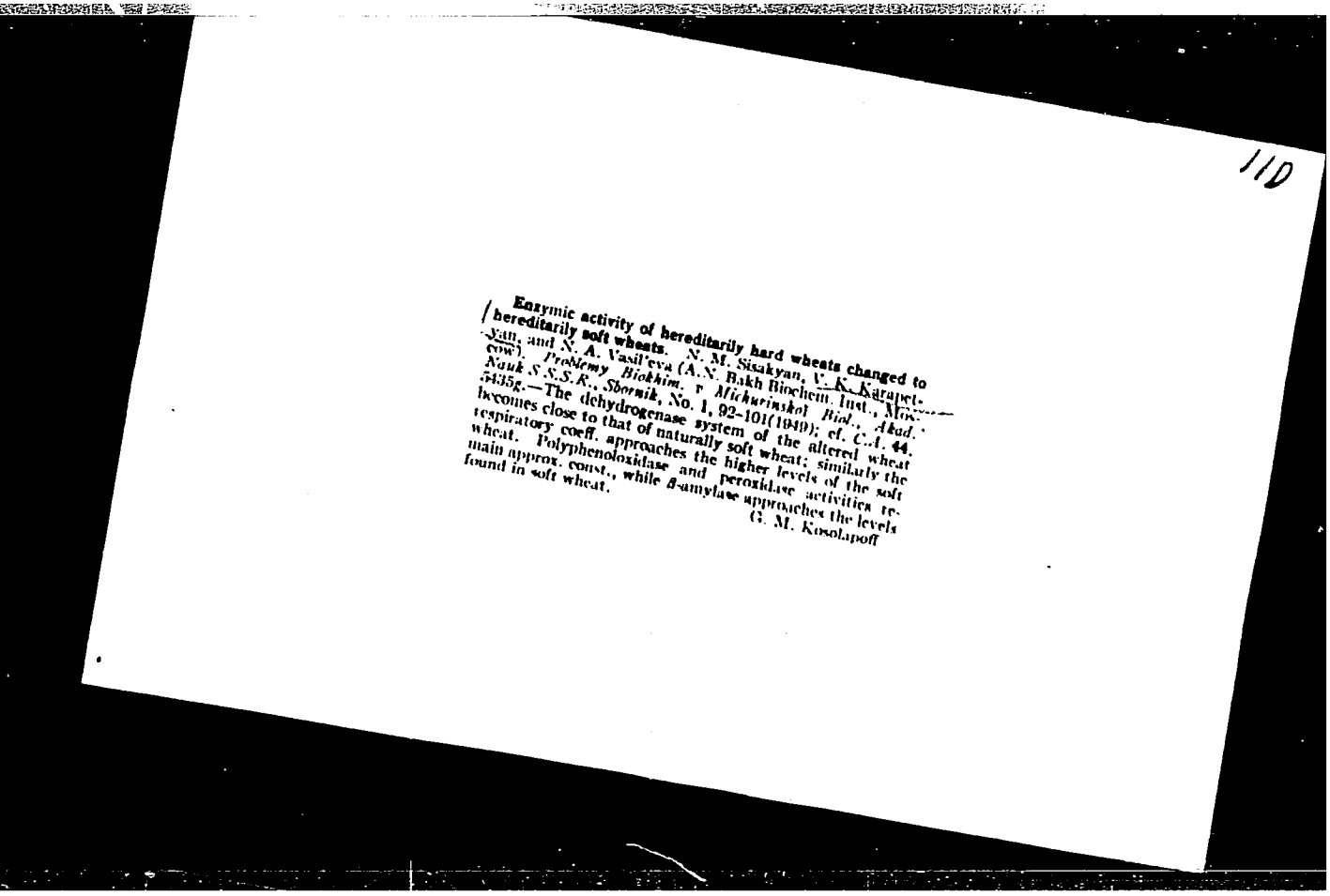
[redacted]

43/49T72

KARAPETYAN, V. K.

Karapetyan, V. K. - "The softening of durum wheat," Yestestvoznaniye v shkole, 1949, No. 6, 18--30

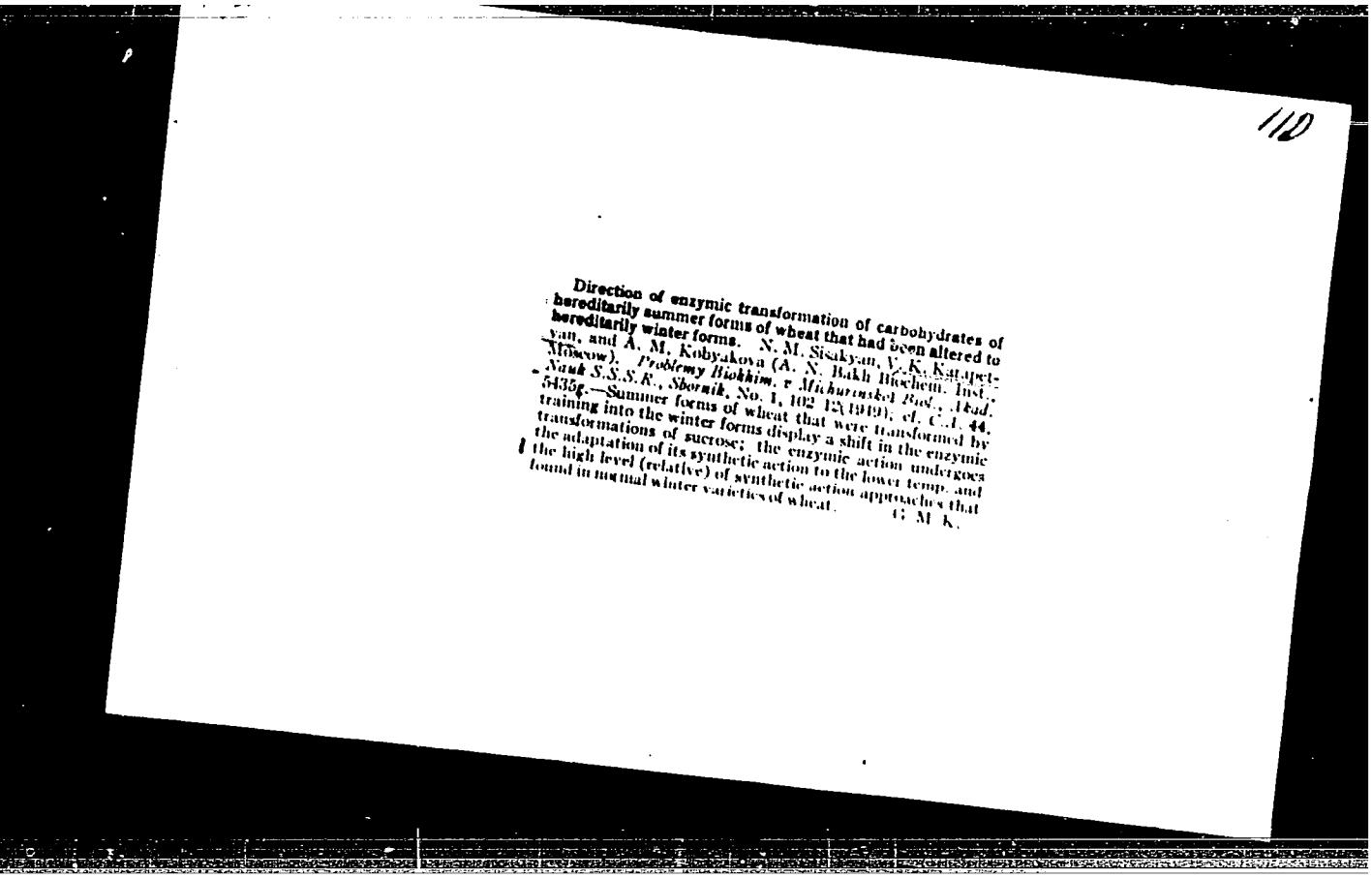
SO: U-3600, 10 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 6, 1949).



IID

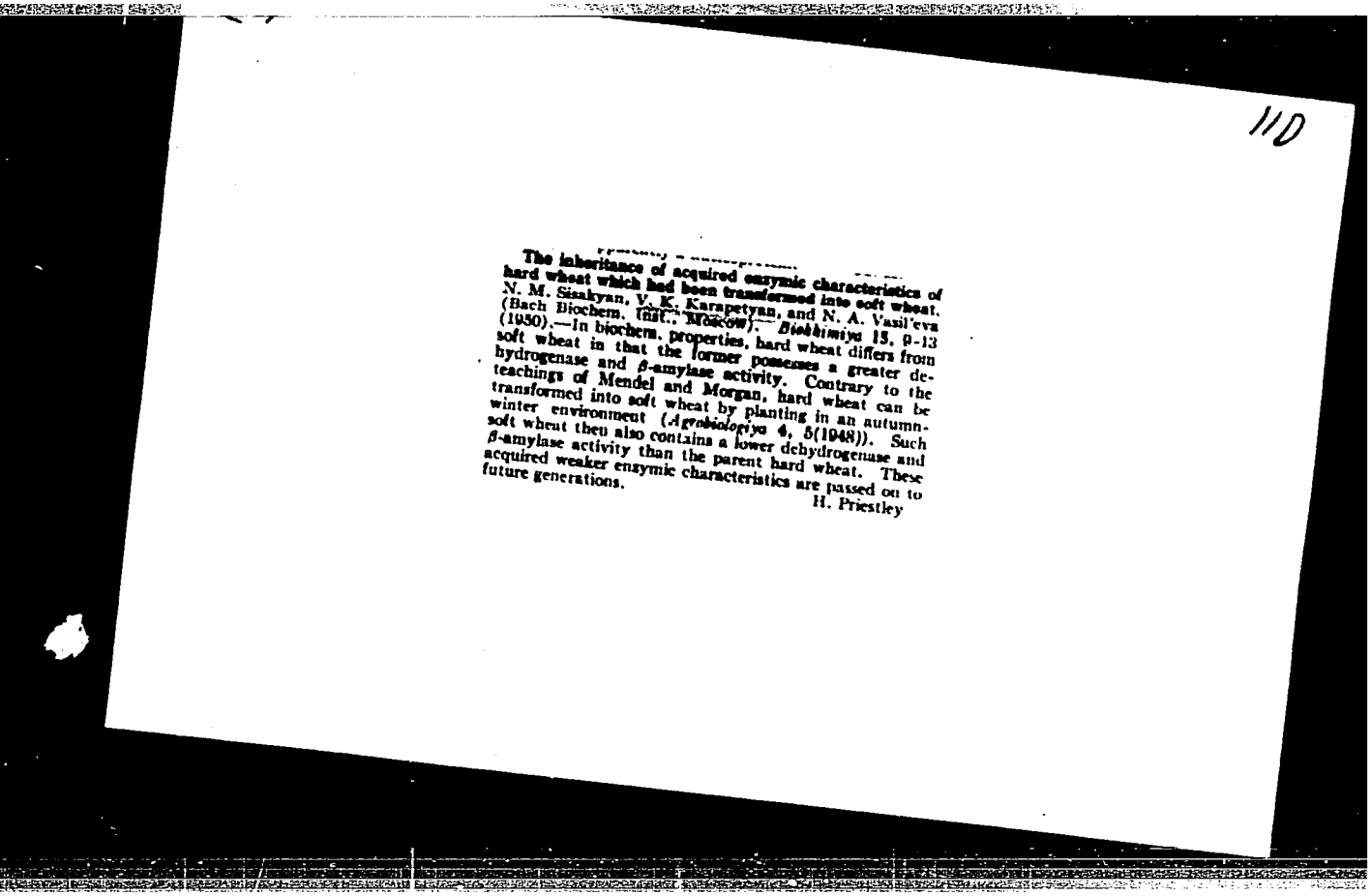
Enzymic activity of hereditarily hard wheats changed to hereditarily soft wheats. N. M. Sisakyan, V. K. Karapetyan, and N. A. Vasil'eva (A. N. Bakh Biochem. Inst., Moscow). *Problemy Biokhim. i Michurinskoi Biol., Akad. Nauk S.S.S.R., Sbornik*, No. 1, 92–101(1949); cf. *C.A.* **44**, 5435g.—The dehydrogenase system of the altered wheat becomes close to that of naturally soft wheat; similarly the respiratory coeff. approaches the higher levels of the soft wheat. Polyphenoloxidase and peroxidase activities remain approx. const., while β-amylase approaches the levels found in soft wheat.

G. M. Kosolapoff



110

Direction of enzymic transformation of carbohydrates of hereditarily summer forms of wheat that had been altered to hereditarily winter forms. N. M. Sisakyan, V. K. Katapetyan, and A. M. Kobyakova (A. N. Bakh Biochem. Inst., Moscow). *Problemy Biokhim. i Mikrobiologii Biol. Akad. Nauk S.S.S.R., Sbornik*, No. 1, 102-12(1949); cf. C.A. 44, 5435g.—Summer forms of wheat that were transformed by training into the winter forms display a shift in the enzymic transformations of sucrose; the enzymic action undergoes the adaptation of its synthetic action to the lower temp. and the high level (relative) of synthetic action approaches that found in natural winter varieties of wheat. G. M. K.



IID

The inheritance of acquired enzymic characteristics of hard wheat which had been transformed into soft wheat. N. M. Sisakyan, V. K. Karapetyan, and N. A. Vasil'eva (Bach Biochem. Inst., Moscow). *Biokhimiya* **15**, 9-13 (1950).—In biochem. properties, hard wheat differs from soft wheat in that the former possesses a greater dehydrogenase and β-amylase activity. Contrary to the teachings of Mendel and Morgan, hard wheat can be transformed into soft wheat by planting in an autumn-winter environment (*Agrobiologiya* 4, 5(1948)). Such soft wheat then also contains a lower dehydrogenase and β-amylase activity than the parent hard wheat. These acquired weaker enzymic characteristics are passed on to future generations.

H. Priestley

USSR/Biology - Genetics Dec 50

"New Data on the Directed Alteration of Hard Wheat to Soft Wheat by Means of Winter Cultivation and Facts on the Transformation of Wheat Into Rye," V. K. Karapetyan

Trudy Inst Genetiki, Ak Nauk SSSR, No 18, pp 47-65

After repeated winter cultivation for several yr, grains of Tr. vulgare (I) develop on ears of Tr. durum (II). Plant then has 28 somatic chromosomes in some tissues (typical for II) and 42 in others (typical for I). In regions where conditions of wintering are very severe, individual grains of

LC

183T2

USSR/Biology - Genetics (Contd) Dec 50

rye (Secale sereale) develop on plants of I and II. Such grains of rye, grown in complete isolation, develop into full-fledged rye plants which yield rye grains. Individual grains of wheat (1 per ear) were found on ears of wild fld rye of type which develops from rye grains originating on wheat. Such wheat grains had 42 chromosomes in dividing cells (typical for wheat), while all other grains of same ear had 14 chromosomes (typical for rye).

LC

183T2

KARAPEYTAN, V. K.

USSR/Biology, Agricultural Genetics Mar/Apr 52

"Some New Data on the Transformation of Species in Cereal Plants," V. K. Karapetyan. Inst of Genetics, Acad Sci USSR

"Agrobiologiya" No 2, pp 29-44

Single wheat grains found in rye ears yielded 42-chromosome wheat plants; the remaining rye grains grew into typical 14-chromosome rye plants. Rye plants grown from rye grains found in ears of soft and hard wheat showed the same chromosome comps as ordinary rye plants. A new form of soft wheat which originated from hard wheat had 28 and 48 chromosomes in somatic tissues and 14 and 28 chromosomes in genetic cells, thus combining the properties of Tr. durum and Tr. vulgare. In some cases, grains resembling rye which originated from Tr. durum ears yielded spelt (Tr. dicoccum) plants with 28 chromosomes at the tips of the rootlets (a characteristic typical for spelt). Rye plants were obtained by planting vernalized ("yarovized") wheat grains either in the winter or spring (winter soft wheat and semi-winter hard wheat). The rye plants obtained were not hybrids: they were fully fertile. No intermediate forms between rye and wheat were observed. Expts proved that the rye grains found in wheat ears originated without fertilization. On castration and isolation, plants from such grains also formed grains without fertilization. The rye plants from grains resulting on castration and isolation were quite normal and had 14 chromosomes at the tips of the rootlets, which is typical for rye.

215T2

[redacted]AFTYAN, V. K.

2. USSR 600

4. Plants - Evolution

7. Species development in plants, Trudy Inst. gen, No. 19, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

[redacted], V.K.

Genetic analysis of the first and second generations of rye-wheat and wheat-rye hybrids. Trudy Inst.gen. no.20:35-59 '53. (MLRA 7:1)
(Rye) (Wheat) (Hybridization, Vegetable)

Karapetyan, V.K.

USSR.

Biochemical and technological characteristics of rye with wheat heredity. V. I. Kretovich, Ya. N. Kuprits, V. K. Karapetyan, and A. A. Bundel' (A. N. Bakh Inst. Biochem., Acad. Sci. U.S.S.R., Moscow and Inst. Genetics, Acad. Sci. U.S.S.R.). *Biokhim. Zerna., Akad. Nauk S.S.S.R., Sbornik* 2, 134–9(1954).—The grains of rye, which had originated in the ears of wheat in the previous generation, have an intermediate chem. compn. between rye and wheat, the examn. being made on the basis of viscosity of aq. ext., glassiness of the grain, quality of flour and bread, and amylolytic activity.

G. M. Kosolapoff

KARAPETYAN, V. K.

U S S R .

The surface films of the gliadins of rye with wheat heredity. V. L. Kretovich, G. A. Deborin, A. A. Buidel, L. B. Gorbacheva, and V. K. Karapetyan (A. N. Bakh Inst. Biochem., Acad. Sci. [redacted] and Inst. Genetics, Acad. Sci. U.S.S.R.). *Biokhim. Zerna, Akad. Nauk S.S.S.R., Sbornik* 2, 140-6(1954).—The surface films of rye grains found in wheat ears were studied. The mol. wt. of gliadin from wheat or rye is 30,000. The mol. wt. of the specimens taken from the "altered" grains is but 15,000; this material also shows significantly greater limiting area in formation of a monolayer, than is the case for the normal wheat or rye. Thus, the formation of these grains is accompanied by a severe alteration of the protein structure.

G. M. Kosolapoff

KARAPETYAN, V.K.

New data on plant species formation. Trudy Inst.gen. no.22: 121-136 '55. (MLRA 9:4)
(Wheat)

KARAPETYAN, V.K.

Winter and frost hardiness of soft wheats produced from hard spring wheat and hard semiwinter wheat. Trudy Inst.gen.no.23:181-189 '56.
(MLRA 10:1)

(Wheat) (Plants--Frost resistance)

KARAPETYAN, V.K.

The problem of species and species formation in the light of studies on interspecific hybridization of plants. Trudy Inst. gen. no.24:35-75 '58. (MIRA 11:9)

(Hybridization, Vegetable) (Species)

KARAPETYAN, V.K.

Biological effect of nuclear radiation on plants. Agrobiologiia no.1:82-85 Ja-F '60. (MIRA 13:5)

1. Institut genetiki Akademii nauk SSSR.
(Plants, Effect of radioactivity on)

KARAPETYAN, V.K.

Changing winter wheat varieties with poor wintering characteristics into winter hardy varieties. Agrobiologiia no.6:878-885 N-D '60. (MIRA 13:12)

1. Institut genetiki Akademii nauk SSSR.
(Wheat)

KARAPETYAN, V.K.

Converting hard frost-sensitive winter wheat and spring wheat into frost-resistant winter wheat. Trudy Inst. gen. no. 27:54-67 '60. (MIRA 13:12)
(Wheat) (Plants--Frost resistance)

KARAPETYAN, V.K.

Effect of gamma rays on heredity in wheat. Trudy Inst. gen. no. 27:311-314 '60. (MIRA 13:12)
(Plants, Effect of gamma rays on)
(Heredity)
(Wheat)

KARAPETYAN, V.K.

Effect of gamma rays on soft wheat and rye. Trudy Inst. gen. no. 27:315-318 '60. (MIRA 13:12)
(Plants, Effect of gamma rays on) (Wheat) (Rye)

KARAPETYAN, V.K.

Winterhardiness and developmental characteristics of interspecific hybrid plants. Trudy Inst. gen. no.28:91-95 '61. (MIRA 14:11)
(WHEAT BREEDING) (PLANTS--FROST RESISTANCE)

KARAPETYAN, V.K.

Effect of ionizing radiation on heredity and vitality in some wheat and rye varieties. Trudy Inst. gen. no.28:141-145 '61. (MIRA 14:11)

(WHEAT) (RYE)
(PLANTS, EFFECT OF GAMMA RAYS ON)

KARAPETYAN , V.K.

"The effect of ionizing radiation on the heredity and life of some varieties of wheat and rye."

Report submitted to the 2nd Intl. Colloq. on Indect Pathology and Microbiological Control, Paris, France 16-24 Oct 1962

S/670/62/000/029/004/006
D291/D307

AUTHOR: Karapetyan, V.K.

TITLE: The biological effect of ionizing radiation on variability in spring wheat during its conversion to the winter habit

SOURCE: Akademiya nauk SSSR. Institut genetiki. Trudy. no. 29, 1962, 194-206

TEXT: In 1957 work was initiated at the Institut genetiki AN SSSR (Institute of Genetics of the AS USSR) on the use of ionizing radiation for shattering the hereditary basis of plants, with subsequent cultivation under different environments. The present investigation was intended to show that when spring wheat is treated in this manner, forms differing in their developmental habit arise. Air-dry seeds of the Armenian spring variety Erinaceum (Triticum compactum var, erinaceum) were treated with Co^{60} gamma rays at doses ranging from 8 to 16 kr. The 10-16 kr doses were excessive, but a number of plants derived from 8 kr-treated seed survived the

Card 1/3

The biological effect ...

winter when sown in autumn and were in fact shown to be winter forms genetically. After two generations of autumn sowing, different families of the progeny of one of the surviving plants showed survival percentages of 37.8 to 82.4%. They were incapable of caring when sown in spring. Subsequently other winter forms were obtained in a similar manner, having greater overwintering capacity than the standard winter wheat variety Ukrainka. The winter selections produced grain yields which were, on average, 10-12% higher than in the original spring form. They were often early maturing, and had a long vernalization stage, not less than 50-55 days. 60% of the winter forms resembled the original variety morphologically. Others were classified as T. compactum var. rubriceps and T. vulgare vars. ferrugineum and erythrospermum. Some of the winter forms were compact, with strong, lodging-resistant straw; grains were often large, vitreous, uniform and high in protein. These compact forms were genetically stable, retaining their properties in successive generations. It is thought that some of the types which combine earliness, winter hardiness and high productivity will be of practical value. In assessing the results it is pointed out that the treatments applied

The biological effect ...

offer a very rapid way of converting spring into winter wheat, the effects are caused by environmental influences on plants with shattered inheritance. There are 6 figures and 4 tables.

KARAPETYAN, V.K.

Variability of plants grown from embryonally young seeds.
Trudy Inst. gen. no.29:435-441 '62. (MIRA 16:7)

(Botany—Variation)

KARAPETEAN,V.K. (Karapetyan,V.K.)

Ionizing radiation and its action on the heredity and vitality of some varieties of wheat and rye. Analele biol 16 no.1:12-18 Ja-F'62

KARAPETYAN, V. K.

"Genetical Analysis of Rye-Wheat and Rye-Wheat Hybrids."

Report presented at the 2nd International Wheat Genetics Symposium, 19-24 Aug 63, Lund, Sweden.

KARAPETYAN, V.K.

Effect of ionizing radiation on the variability of spring wheat during its transformation into winter wheat. Agrobiologiia no.1: 107-110 Ja-F '63. (MIRA 16:5)

1. Institut genetiki AN SSSR.
(Botany--Variation) (Wheat) (Plants, Effect of radiation on)

KARAPETYAN, V.K.

Controlled hereditary change of dual-purpose wheat into winter-hardy forms of winter wheat. Trudy Inst. gen. no.30:109-118 '63.(MIRA 17:1)

KARAPETYAN, V.K.

Variability of plants grown from embryonially young seeds.
Zhur. ob. biol. 24 no.5:360-365 S-O '63. (MIRA 17:1)

1. Institut genetiki AN SSSR, Moskva.

KARAPETYAN, V.K.

Controlled heritable transformation of the dual-purpose wheat into frost-resistant winter forms. Izv. AN SSSR. Ser. biol. no.3: 451-459 My-Je '64. (MIRA 17:5)

1. Institute of Genetics, Academy of Sciences of the U.S.S.R. Moscow.

KARAPETYAN, V.K.; GYULANYAN, A. Ye.

Biological effect of ionizing radiation on the variability of spring wheat during its conversion into winter wheat. Izv. AN Arm. SSR. Biol. nauki 15 no.12:33-43 D'62 (MIRA 17:8)

1. Institut genetiki AN SSSR i Leninakanskaya gosudarstvennaya selektsionnaya stantsiya.

KARAPETYAN, V.K.

Characteristics of the development of wheat-rye and rye-wheat hybrids. Trudy Inst. gen. no.31:119-125 '64. (MIRA 17:9)

KOLESNIKOV, N.A.; KUBYSHEV, N.N.; FEDORENKO, V.G.; KARAPETYAN, V.K.; UNZHAKOV, M.S.

Intensification of the shaft furnace lead smelting process by augmenting the oxygen concentration. Tsvet. met. 27 no.12: 33-38 D '64 (MIRA 18:2)

OKUNEV, A.I.; CHUMAREV, V.M.; DONCHENKO, P.A.; KARAPETYAN, V.K.

Accelerating the fuming of slags with the use of oxygen-enriched air. TSvet. met. 36 no.5:34-41 My '63. (MIRA 16:10)

AKHMETOV, K.T.; DONCHENKO, P.A.; KUBYSHEV, N.N.; VOLKOV, I.P.; KARAPETYAN, V.K.; YELYAKOV, I.I.; CHIKRIZOV, M.V.; KHOBDABERGENOV, R.Zh.

Modernizing the industrial equipment of lead production and the growth of labor productivity. TSvet. met. 36 no.7:11-19 Jl '63. (MIRA 16:8)
(Lead industry--Equipment and supplies)

ALEKSEYEVSKIY, V.V.; KARAPETYAN, V.M., inzh.; GRIGORYAN, Ye.B., inzh.

New series of distribution transformers with 160 - 630 kv.-a power rating. Vest. elektroprom. 34 no.4:25-26 Ap '63. (MIRA 16:10)

1. Chlen-korrespondent AN Armyanskoy SSR (for Alekseyevskiy).

KARAPETYAN, V.M.; AYKAZUNI, G.A.

The TSM-180/10 oil-filled power transformer. Biul.tekh.-ekon. inform. no.11:40-41 '58. (MIRA 11:12)
(Electric transformers)

KARAPETYAN, V. M.

37608. sluchay vistseral'nogo leyshmanioza j vzroslogo v g. jerevane. trudy in-ta malyarii i med. papazitologii (m-vo zdravookheaneniya arm.ssr) vyp. 4, 1949, s. 152-56.

SO: Letopis' Zhurnal' nykh Statey, Vol. 37, 1949

SOV/110-59-9-2/22

AUTHORS: Oganyan, R.A., Gukasyan, M.G. and Karapetyan, V.M. (all Engineers)

TITLE: A New Series of 6 and 10 kV Power Transformers of the First and Second Frame Sizes

PERIODICAL: Vestnik elektropromyshlennosti, 1959, № 9, pp 5-8 (USSR)

ABSTRACT: A new series of general-purpose transformers designated type TSM has been developed. Altogether there are ten different ratings, each being greater than the previous one by a factor of 1.73. The ratings in the first frame size are 20, 35, 60 and 100 kVA and in the second frame size 180, 320 and 560 kVA. In addition, subsidiary ratings of 135, 240 and 420 kVA are made in the second frame size. The high-voltage windings will be for 6 or 10 kV, though 6.3 kV will be supplied for existing installations. Off-load tapping switches of ± 5% are provided on the high-voltage side. The ratio of copper to iron loss is 3.5 - 4.0. To reduce deterioration of transformer oil and insulation the maximum temperature rise at the top of the oil has been reduced from 60°C to 55°C, and that of the windings reduced from 70°C in the old standard to 65°C. The insulation, and the clearances in the main insulation, are the same for both 6 and 10 kV

Card 1/3

A New Series of 6 and 10 kV Power Transformers of the First and Second Frame Sizes

transformers. Further reduction in these clearances is undesirable because it would impair cooling. The cores will be made of annealed cold-rolled steel grade E330, 0.35 mm thick. The sheets will be insulated with varnish. A number of changes have been made, mainly with the object of reducing weight and size or to facilitate manufacture. A transformer type TSM 100/6-10 is illustrated in Fig 1, alongside an old TM series transformer of the same rating. A transformer type TSM 180/6-10 is illustrated in Fig 2. The three-limb core-type construction is used; the core clamps are made of angle iron and the clamping arrangements are described. An illustration of a typical core and coil assembly for the new series of transformers is given in Fig 5. The core and coils no longer have any attachment to the lid and are fully supported by the tank, so that there is less risk of damage in transport. The high-voltage leads are made of flexible wire and the low-voltage leads of copper strip. The new transformer tanks for 20 and 35 kVA are made of 2 mm sheet steel stiffened by cooling ribs. From 60 kVA and upwards

A New Series of 6 and 10 kV Power Transformers of the First and Second Frame Sizes

tube-cooled tanks are used, the tubes being oval and not round. The tanks themselves are of so-called "oval" section. Even the smallest of the 6 kV transformers have conservators. The other fittings are described. The total losses of the new transformers are 19-25% lower than those of transformers conforming to the existing standard GOST 401-41, also of transformers made by the East German firms TRO and TUR. Fig 3 compares the weights of oil in the old and new series transformers and in the German transformers. If all Soviet transformers in these ratings were made in the new type the total annual economy of copper would be 120 tons, of steel 900 tons, of transformer oil 4000 tons and of other materials, including insulation, 3900 tons. Tests on the new transformers have confirmed that the design and construction are well chosen.

Card 3/3

There are 5 figures.

KARAPETYAN, V. N.

37607. k voprosu o lechenii vistseral'nogo leyshmanioza solyjsur'minom- v ogl: trudy in-ta malyarii i med. parazitologin. (m-vo zdravookhraneniya arm ssr), vyp. 4, 1949, s. 147-51

SO: Letopis' Zhurnal' nykh Statey, Vol. 37, 1949

GAMBARYAN, P.P.; KARAPETYAN, V.S.; AYRUMYAN, K.A.; KAZARYAN, K.G.; MKRTCHUMYAN, S.K.

Ecology of the Promethean vole(Prometheomys schaposchnivkovi Sat.). Zool. abor. no. 10:5-16 '57. (MIRA 11:7)
(Adzhar--Imeretian Range--Field mice)

ORZHESHKOVSKIY, V.V.; KARAPETYAN, V.S.; TIMOFEYEVA, N.V.

Eye diseases in infectious nonspecific polyarthritis. Sov.med. 23 no.7:44-46 Jl '59. (MIRA 12:11)

1. Iz Sochinskogo nauchno-issledovatel'skogo instituta revmatizma (dir. - prof.M.M.Shikhov) Ministerstva zdravookhraneniya RSFSR.
(EYE DISEASES complications)
(ARTHRITIS complications)

KECHEK, G.A.; KARAPETYAN, V.S.

Methods for direct determination of preformed ammonia and glutamine in the trichloroacetic acid filtrate of blood. Vop. biokhim. 1:177-183 '60. (MIRA 14:12)

1. Department of Biochemistry, Academy of Sciences of Armenian S.S.R., Erevan.
(AMMONIA) (GLUTAMINE)
(BLOOD--ANALYSIS AND CHEMISTRY)

MANVELYAN, M.G.; BABAYAN, G.G.; GEVORKYAN, S.V.; ASLANYAN, D.G.; KARAPETYAN, V.TS.

Study of the system Na_2SiO_3 - Ca $(OH)_2$ - H_2O at 25°C and of the conditions of the adsorption of sodium hydroxide on a calcium metasilicate precipitate. Izv.AN Arm.SSR.Khim.nauki 14 no.4:309-317 '61. (MIRA 14:10)

1. Institut khimii Sovnarkhoza Armyanskoy SSR.
(Calcium silicate) (Sodium hydroxide) (Adsorption)

DEMIN, Yu.M.; KOSAYELYAN, S.S.; KARAPETYAN, V.S.; OSIPOVA, E.N.; AKOPYAN, Deh.A.

Participation of γ-aminobutyric acid in the metabolism of glutamic and aspartic acids, alanine and glutamine and in neutralization of ammonia in the brain tissue. Vop. biokhim. mozg. 1:45-59 '64. (MIRA 18:9)

1. Institut biokhimii AN ArmSSR.

BABAYAN, G.G.; KARAPETYAN, V.TS.

Physicochemical properties of aqueous solutions of sodium and potassium silicates. Part 1: Electric conductance and viscosity of potassium silicate aqueous solutions. Izv.AN Arm.SSR.Khim.nauki 17 no.1: 29-37 '64. (MIRA 17:4)

1. Institut khimii Gosudarstvennogo komiteta tsvetnykh i chernykh metallov SSSR.

Kurapelyan, V. V.

3561. Kurapelyan, V. V. Determination of the pressure of an interference-affected wave on a vertical structure by means of electro-hydrodynamic analogies (in Russian), *Trudih.-i. in-ta. sanovaya i fundamentov*, no. 25, 62-84, 1955; *Ref. Zh. Mekh.* 1956, Rev. 4465.

A detailed description is given of the known electro-hydrodynamic analogy method and its application to the measurement of wave pressures. Measured results are quoted.

For comparison, a pressure diagram on the Saint-Flour method is given; the pressures calculated by the latter are higher than those determined by the author. S. S. Volt, USSR.

Courtesy Referativnyi Zhurnal
Translation, courtesy Ministry of Supply, England

L 29083-66

ACCESSION NR: AP5019208 UR/0056/65/049/001/0007/0009

AUTHOR: Balats, M. Ya.; Karapetyan, V. V.; Kondrat'yev, L. N.; Obukhov, Yu. V.

TITLE: Intensity of nonradiative transitions in Ta and Pu^{239} mesic atoms

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965, 7-9

TOPIC TAGS: mesic atom, nonradiative transition, tantalum, plutonium, Mu meson, x ray spectrum

ABSTRACT: This is a continuation of intensity measurements of nonradiative transitions in a number of heavy elements (ZhETF v. 38, 1715, 1960 and v. 39, 1168, 1960), carried out by means of a scintillation γ-spectrometer. The authors investigated the mesic x-ray spectra and have determined the ratio of the intensities of the 2p--1s transitions in Ta and Pu^{239} relative to Pb. Some modification was made in the experimental set-up for the measurements with Pu in order to accomodate the large background in the γ-spectrometer counter from the natural radioactivity of Pu^{239}. Preliminary measurements have shown that when the γ-detector is loaded by the Pu activity the γ-ray spectrum from the 2p--1s transitions in Pb is displaced towards the hard region by 3--5%, but this shift causes no noticeable error in the experimental results. The fraction of the nonradiative 2p--1s transitions was determined by comparison of the γ-spectra obtained with lead and with the materials

Card 1/2

L 1571-66 EWT(m)/EWP(t)/EWP(b) DIAAP/IJP(c) JD/JG

ACCESSION NR: AP5019208 UR/0056/65/049/001/0007/0009

45

AUTHOR: Balats, M. Ya.; Karapetyan, V. V.; Kondrat'yev, L. N.; Obukhov, Yu. V. 43

B

TITLE: Intensity of nonradiative transitions in Ta and Pu^{239} mesic atoms

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965, 7-9

TOPIC TAGS: mesic atom, nonradiative transition, tantalum, plutonium, Mu meson, x ray spectrum

ABSTRACT: This is a continuation of intensity measurements of nonradiative transitions in a number of heavy elements (ZhETF v. 38, 1715, 1960 and v. 39, 1168, 1960), carried out by means of a scintillation γ-spectrometer. The authors investigated the mesic x-ray spectra and have determined the ratio of the intensities of the 2p--1s transitions in Ta and Pu^{239} relative to Pb. Some modification was made in the experimental set-up for the measurements with Pu in order to accomodate the large background in the γ-spectrometer counter from the natural radioactivity of Pu^{239}. Preliminary measurements have shown that when the γ-detector is loaded by the Pu activity the γ-ray spectrum from the 2p--1s transitions in Pb is displaced towards the hard region by 3--5%, but this shift causes no noticeable error in the experimental results. The fraction of the nonradiative 2p--1s transitions was determined by comparison of the γ-spectra obtained with lead and with the materials

Card 1/2

L 1571-66

ACCESSION NR: AP5019208

studied. The number of radiative transitions was 1 ± 0.08 and 0.59 ± 0.06 for Ta and Pu^{239}, respectively. The corresponding fractions of nonradiative transition were therefore 0 ± 0.08 and 0.41 ± 0.06. In the case of tantalum, a correction was made for the solid angle. The results are consistent with the theoretical assumptions of D. F. Zaretskiy and V. M. Novikov (ZhETF v. 41, 214, 1961). "The authors thank Prof. B. Pontecorvo for suggesting the experiment and for interest in the work." Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKIAE (Institute of Theoretical and Experimental Physics, GKIAE)

SUBMITTED: 18Nov64 ENCL: 00 SUB CODE: NP

NR REF SOV: 002 OTHER: 000

Card 2/2

KARAPETYAN, V.Ye.; MAKSAKOV, B.I.; FEOFILOV, P.P.

Absorption and luminescence of divalent samarium in alkali halide single crystals. Opt. i spektr. 14 no.3:441-443 Mr '63. (MIRA 16:4)
(Alkali metal halide crystals--Growth) (Samarium) (Luminescence)

L 34416-66 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6015441 SOURCE CODE: UR/0051/66/020/005/0918/0920

AUTHOR: Bakhshiyeva, G. F.; Karapetyan, V. Ye.; Morozov, A. M.

ORG: none

TITLE: Optical characteristics of lanthanum sodium molybdate single crystals

SOURCE: Optika i spektroskopiya, v. 20, no. 5, 1966, 918-920

TOPIC TAGS: molybdate, lanthanum compound, sodium compound, refractive index, crystal optic property

ABSTRACT: Large single crystals of $LaNa(MoO_4)_2$ whose C axis was parallel to the axis of growth were grown on a seed by pulling from the melt, and their absorption spectra and refractive indices were measured. The absorption spectrum of an $LaNa(MoO_4)_2$ crystal taken with SF-4 and IKS-14 spectrophotometers is shown in the figure. It is noted that the absorption spectra are typical of all crystals having a scheelite structure. Refractive index measurements showed that the light ray is "fractionated" on passing through an $LaNa(MoO_4)_2$ prism, apparently because the lattice of this binary molybdate is highly disordered. This factor is also thought to cause the relatively broad luminescence lines of Nd^{3+} in $LaNa(MoO_4)_2$ and the broad ESR lines of this compound reported by other authors. Authors express their deep appreciation to A. I. Stozharov and P. P. Feofilov for their steady interest and helpful discussions, and

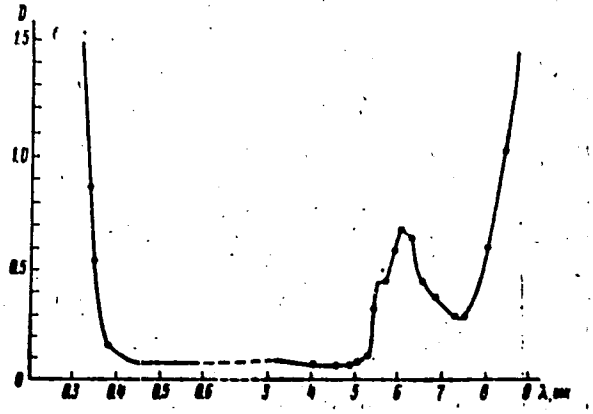
UDC: 535.321 + 535.341:548.0

Card 1/2

L 34416-66

ACC NR: AP6015441

tc Ye. M. Sychev and I. A. Shube for assistance in the work. Orig. art. has: 1 figure and 1 table.



SUB CODE: 20/ SUBM DATE: 18Oct65/ ORIG REF: 003/ OTH REF: 006

Card 2/2 BLG

KARAPETYAN, Ye.A.; KRYSHOVA, N.A., zaveduyushchaya.

Role of the protective sleep inhibition in narcolepsy and other forms of sleep pathology. Trudy Inst.fiziol. 1:381-393 '52. (MLRA 6:8)

1. Sektor organicheskikh nervnykh rasstroystv. (Sleep)

ANDREYEV, B.V.; KARAPETYAN, Ye.A.; MAYOROV, F.P., zaveduyushchiy; KRYSHOVA, N.A., zaveduyushchaya.

Peculiarities of nocturnal sleep in narcolepsy according to data obtained by the activity recorder. Trudy Inst.fiziol. 1:376-380 '53. (MLRA 6:8)

1. Laboratoriya fiziologii i patologii vysshey nervnoy deyatel'nosti (for Mayorov and Andreyev). 2. Sektor organicheskikh nervnykh rasstroystv (for Kryshova and Karapetyan). (Sleep)

KARAPETYAN, Ye. A.

USSR/Medicine - Nervous disorders

Card 1/1 Pub. 86 - 37/37

Authors : Karapetyan, Ye. A.

Title : Somnambulism

Periodical : Priroda 43/10, page 127, Oct 1954

Abstract : The characteristics of sleepwalking are described and a theory as to the physical cause of this phenomenon is presented. Sleepwalking is considered as a pathological condition of the nervous system and directions are given for its treatment.

Institution : ... Inst Physiology im Pavlov

Submitted : ...